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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,344	03/04/2002	Christopher P. Bertellotti	NOR-1048	3862

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EXAMINER

KOCH, GEORGE R

ART UNIT PAPER NUMBER

1734

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,344

Applicant(s)

BERTELOTTI, CHRISTOPHER P

Examiner

George R. Koch III

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/10/2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inamura et al (US Patent 3,850,660) in view of Fogal, Sr. et al (US 4,958,587).

Inamura discloses an apparatus comprising a powder discharge device (item 22), an object holder (items 2 and 3), and a rotating device (not shown, recited in column 4, lines 9-20). The rotating device or mechanism rotates the object about an axis of rotation.

Inamura does not disclose that the outlet is positioned within the hollow object adjacent the interior surface or that the outlet is oriented to discharge powder in a direction transverse the axis of rotation and normal to the outlet.

Fogal discloses that the outlet is positioned within the hollow object adjacent the interior surface or that the outlet is oriented to discharge powder in a direction transverse the axis of rotation and approximately normal to the outlet (see, for example, Figure 1. Fogal discloses that this configuration allows interior coating in a short period of time with minimum effort and relatively low cost (column 1, lines 48-51). Therefore, it would have been obvious to one of ordinary skill in the art to have used an outlet is positioned within the hollow object adjacent the interior surface and an outlet that is

oriented to discharge powder in a direction transverse the axis of rotation and normal to the outlet in order to coat in a short period of time with minimum effort and relatively low cost.

As to claim 4, Inamura as applied above discloses that the object roller comprises a pair of rollers (items 2 and 3) and that the rotating mechanism comprises a motor connected to at least one roller (not shown, recited in column 4, lines 9-20).

As to claim 7, Inamura does not disclose a transfer mechanism connected to the electrostatic spray device.

Fogal discloses a transfer mechanism (item 50) connected to the spray device (see column 3, lines 3-10). Fogal discloses that this mechanism allows the coating device to be moved to a position for application in the inside of a hollow object. One in the art would immediately appreciate that such a transfer mechanism protects the spray device while the substrate is being placed or removed from the holding device, and improves functioning by allowing movement of the spray device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such a transfer device in order to improve handling of the substrate.

3. Claim 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inamura and Fogal as applied to claim 1 above, and further in view of Gillette et al (US Patent 5,242,718).

Inamura as applied to claim 1 above does not disclose that the powder discharge device comprises a chamber, and an outlet positioned in upper portion of the chamber,

the chamber adapted to receive and fluidize a bed of the powder to form a powder cloud discharging through the outlet.

Gillette discloses that the powder discharge device (see Figure 1 and 2) comprises a chamber (item 38), and an outlet ((item 42) positioned in upper portion of the chamber, the chamber adapted to receive and fluidize a bed of the powder to form a powder cloud discharging through the outlet. Gillette discloses that this system minimizes coating material loss, and improves cleanliness of the overall system (see column 6, lines 36-68). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the coating system of Gillette in order to minimize coating material loss and overall cleanliness.

As to claim 3, Gillette as applied to claim 2 above also discloses a porous member (Figure 2, item 24), an electrostatic charging device (item 40) and a pressurized air inlet (item 120, see Figure 1).

4. Claim 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inamura and Fogal as applied to claim 1 above, and further in view of Goodridge (US Patent 3,496,413)

Inamura discloses an axis of rotation for the hollow object (see column 4, line 10, which discloses rotation).

Inamura is silent as to whether the outlet comprises an elongated slot.

Goodridge discloses an elongated slot (see, for example, Figure 4, item 58).

Goodridge discloses that the slot arrangement improves effectiveness of application

Art Unit: 1734

(column 3, lines 2-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a slot in order to improve application effectiveness.

As to claim 6, Goodrich discloses walls (items 52) which effectively form chambers and that the elongated slot (item 58) is between the walls.

5. Claim 8-16 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Inamura, Fogal and Gillette as applied to claims 2 and 3 above, and further in view of Goodridge and Bertellotti (US Patent 6,068,702).

Inamura and Fogal as applied above discloses an apparatus comprising a powder discharge device (item 22), an object holder (items 2 and 3), and a rotating device (not shown, recited in column 4, lines 9-20).

Gillette as applied above in claim 2 and 3 discloses that the powder discharge device (see Figure 1 and 2) comprises a chamber (item 38), and an outlet ((item 42) positioned in upper portion of the chamber, the chamber adapted to receive and fluidize a bed of the powder to form a powder cloud discharging through the outlet. Gillette discloses that this system minimizes coating material loss, and improves cleanliness of the overall system (see column 6, lines 36-68). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the coating system of Gillette in order to minimize coating material loss and overall cleanliness.

Furthermore, Gillette's powder discharge device includes a powder fluidizing bed as claimed (see, for example, lines 46-60).

However, Inamura and Gillete do not disclose that the chamber has a converging area gradually decreasing in dimension from lower to upper portion, or a powder collection unit.

Goodridge discloses an elongated slot (see, for example, Figure 4, item 58), which have inclined walls which converging in a direction from the lower portion toward the upper portion. The outlet is positioned at a location between the inclined walls. Goodridge discloses that the slot arrangement improves effectiveness of application (column 3, lines 2-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a slot in order to improve application effectiveness.

Bertellotti discloses a powder collection unit (item 120, see column 5, lines 17-20). One in the art would appreciate that a powder collection unit would allow for retrieval of the unused particle material and would further improve coating efficiency and reduce loss. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized a powder collection container in order to reduce coating material loss.

As to claim 9, Gillette as applied to claim 2 and 3 above also discloses a porous member (Figure 2, item 24), an electrostatic charging device (item 40) and a pressurized air inlet (item 120, see Figure 1).

As to claim 10, Inamura as applied to claim 10 above discloses that the object roller comprises a pair of rollers (items 2 and 3) and that the rotating mechanism

comprises a motor connected to at least one roller (not shown, recited in column 4, lines 9-20).

As to claim 11, Goodridge as applied to claim 8 above discloses an elongated slot (see, for example, Figure 4, item 58). As stated above, Goodridge discloses that the slot and decreasing dimension arrangement improves effectiveness of application (column 3, lines 2-7).

As to claim 13, Inamura, Fogal, Gillette, Goodridge and Bertellotti as applied to claim 8 above disclose the first chamber, the powder fluidizing bed, the object holder, the rotating mechanism, and the powder collection unit as claimed. Furthermore, the powder collection unit of Gillette is considered to be in a powder collection area, which can be interpreted as outside the first chamber.

Claim 14 is rejected on similar grounds as claim 10 above. Inamura discloses that the hollow object includes an exterior surface and that the object holder further comprises a pair of rollers mounted within the second chamber and configured to engage generally opposite sides of the exterior surface, and that the rotating mechanism comprises a motor coupled to at least one roller.

As to claim 12 and 16, Fogal discloses a transfer mechanism (item 50) connected to the spray device (see column 3, lines 3-10). Fogal discloses that this mechanism allows the coating device to be moved to a position for application in the inside of a hollow object. One in the art would immediately appreciate that such a transfer mechanism protects the spray device while the substrate is being placed or removed from the holding device, and improves functioning by allowing movement of

the spray device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such a transfer device in order to improve handling of the substrate.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inamura, FogalGillette, Goodridge and Bertellotti as applied to claim 14 above, and further in view of Osaka (US Patent 4,538,907).

The references as applied to claim 14 above do not disclose powder removing devices.

Osaka discloses the use of scrapers (or doctor blades) in removal of excess powder from roller structures (item 38). One in the art would appreciate that scraper blade maintains cleanliness and improves powder recovery. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used such a scraper or powder removal device in order to improve cleanliness.

7. Claims 15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inamura, FogalGillette, Goodridge and Bertellotti as applied to claim 14 above, and further in view of Kanda (US Patent 3,871,326)

The references as applied to claim 14 above do not disclose powder removing devices.

Kanda discloses the use of air devices for the removal of excess powder from roller structures (see, for example, Figure 6, item 8 and 9). One in the art would

appreciate that the air knife maintains cleanliness and improves powder recovery.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used such an air scraper or doctor in order to improve cleanliness.

Response to Arguments

8. Applicant's arguments with respect to claims 1-16 and 23 have been considered but are moot in view of the new ground(s) of rejection. The remarks are addressed below.

9. In response to applicant's argument (with regard to claims 5 and 6, see page 13, response filed 10/10/2003 and with regard to claims 8-11 and 13-15, see page 17) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the benefits of Goodman is disclosed as in part coming from the shape of the slot and converging walls (see column 2, lines 34-35) and one in the art would have appreciated that benefit and incorporated appropriately.

10. Furthermore, with respect to the arguments on pages 15-16, as to the arguments that Gillette is too large to be combined with Inamura, such dimensional adjustments are considered well within the purview of one of ordinary skill in the art. A mere

practitioner would clearly appreciate that dimensional and positional adjustments would be necessary to ensure operability, and would adjust the dimensions and positions as seen fit.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-800-877-8339 and

Art Unit: 1734

giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



George R. Koch III
December 27, 2003



J.A. LORENZO
PRIMARY EXAMINER